

REMARKS/ARGUMENTS

The claims are 2-11. Independent claims 8 and 9 have been amended to more clearly define the invention. Dependent claims 2-7, 10 and 11 have been amended to conform to the amendments to the respective independent claims. Support for the amendments to independent claims 8 and 9 may be found, *inter alia*, in the drawings figures 1 and 2 as filed and in the specification as filed at pages 8-9. No new matter has been introduced. Reconsideration is expressly requested.

The Examiner has indicated that Applicant's Information Disclosure Statement filed on September 24, 2007 fails to comply with the provisions of 37 CFR 1.98(b) in that the International Search Report for the international application corresponding to the instant U.S. application had not been identified with a publication date. Accordingly, the Examiner indicated that the information in the International Search Report had not been considered as to the merits.

Applicant submits herewith a Third Supplemental Information Disclosure Statement and attached Form PTO-1449 listing the International Search Report for International Application PCT/EP

03/07386 which corresponds to the instant application and indicates a mailing date of November 4, 2003. Applicant respectfully requests that the Examiner initial and return the enclosed Form PTO-1449 to confirm consideration of the subject International Search Report listed therein.

Claims 3-11 were rejected under 35 U.S.C. 102(b) as being anticipated by *Hoffer, U.S. Patent No. 3,132,494* for the reasons set forth on pages 2-3 of the Office Action. Claims 9-11 were rejected under 35 U.S.C. 102(b) as being anticipated by *Fisher, U.S. Patent No. 3,714,797* for the reasons set forth on pages 3-4 of the Office Action. Claims 9-11 were further rejected under 35 U.S.C. 102(b) as being anticipated by *Schreiber, U.S. Patent No. 4,892,433* for the reasons set forth on page 4 of the Office Action.

The rejections are respectfully traversed.

As set forth in amended claims 8 and 9, Applicant's invention provides a drive shaft assembly having a longitudinal shaft for use in an automobile having all-wheel drive or rear-wheel drive. The shaft includes a gearbox-side articulation and

a differential-side articulation, each comprising a homokinetic ball joint. The gearbox-side articulation has a first inner hub, a first outer hub at least partially surrounding the first inner hub and a first cage for guiding a first plurality of balls. The differential-side articulation has a second inner hub, a second outer hub at least partially surrounding the second inner hub and a second cage for guiding a second plurality of balls. The first inner hub and the first outer hub have respective first ball raceways wherein the first plurality of balls is guided in the respective first ball raceways for transmitting a first torque between the first inner hub and the first outer hub. Likewise, the second inner hub and the second outer hub have respective second ball raceways wherein the second plurality of balls is guided in the respective second ball raceways for transmitting a second torque between the second inner hub and the second outer hub.

As recited in amended claim 8, the longitudinal shaft also includes a central articulation having a third inner hub, a third outer hub at least partially surrounding the third inner hub at least in some regions, and a third cage for guiding a third plurality of balls. The third inner hub and the third outer hub

have respective third ball raceways wherein the third plurality of balls is guided in the respective third ball raceways for transmitting a third torque between the third inner hub and the third outer hub. First and second shaft segments are connected with one another so as to rotate together by way of the central articulation.

As recited in amended claim 9, the longitudinal shaft includes a shaft segment connected with the first and second outer hub so as to rotate together.

As recited in each of amended claims 8 and 9, a journal of a gearbox output shaft having a plug-in tooth system is directly connected to the first inner hub and a journal of a differential input shaft having a plug-in tooth system is directly connected to the second inner hub. As further recited in amended claims 8 and 9, each of the first and second inner hubs has a respective central bore provided with a plug-in connection to connect the longitudinal shaft for integral rotation and to center the longitudinal shaft on journals of the gearbox output shaft and the differential input shaft, respectively. In this way, Applicant's invention provides a longitudinal shaft in which the

centripetal forces that cause vibrations and noises are reduced to the greatest possible extent.

The cited references fail to disclose or suggest a drive shaft assembly having the structure recited in amended claims 8 and 9, or to teach the benefits that are achieved from that structure.

In particular, *Hoffer* fails to disclose or suggest a drive shaft assembly including a gearbox-side articulation and a differential-side articulation comprising homokinetic ball joints, including associated cages for guiding respective pluralities of balls, and having associated ball raceways wherein the respective pluralities of balls are guided for transmitting torque between the inner hub and outer hubs, as recited in amended claims 8 and 9.

Moreover, *Hoffer* fails to disclose or suggest a central articulation including associated cages for guiding a respective plurality of balls, and having associated ball raceways wherein the respective plurality of balls are guided for transmitting torque between an inner hub and outer hubs of the central

articulation, as recited in amended claim 8. *Hoffer* also fails to disclose or suggest a drive shaft assembly wherein a journal of a gearbox output shaft having a plug-in tooth system is directly connected to the first inner hub and a journal of a differential input shaft having a plug-in tooth system is directly connected to the second inner hub, as recited in amended claims 8 and 9.

It would not be possible to mount the couplings disclosed in *Hoffer* between a journal of a gearbox output shaft and a journal of a differential input shaft such that the inner hubs are directly connected to these journals, as recited in amended claims 8 and 9. Such an arrangement would require axially displacing the inner hubs of *Hoffer* relative to the outer hubs over a distance corresponding to the distance of the two journals protruding into the inner hubs. The design of the couplings according to *Hoffer*, however does not allow such movement.

The remaining cited references, *Fisher* and *Schreiber*, also fail to disclose or suggest a drive shaft assembly wherein a journal of a gearbox output shaft having a plug-in tooth system is directly connected to the first inner hub and a journal of a

differential input shaft having a plug-in tooth system is directly connected to the second inner hub, as recited in amended claims 8 and 9. In particular, *Schreiber* expressly describes the shaft 6 being connected to the driven wheels (See *Schreiber* at column 2, lines 44-46). Additionally, the input shaft 7 described in *Schreiber* is neither a gearbox output shaft nor a differential input shaft.

With respect to the cited *Fisher* reference, the arrangement described in *Fisher* corresponds to the prior art arrangements described at pages 1-2 of Applicant's specification. In particular, flanges 46 shown in FIGS. 1 and 2 of *Fisher* are connected to corresponding flanges of a driven or driving shaft. Thus, in the arrangement according to *Fisher*, it is not possible to directly couple the inner hubs to a journal of a gearbox output shaft and a differential input shaft, respectively, as recited in Applicant's amended claims 8 and 9.

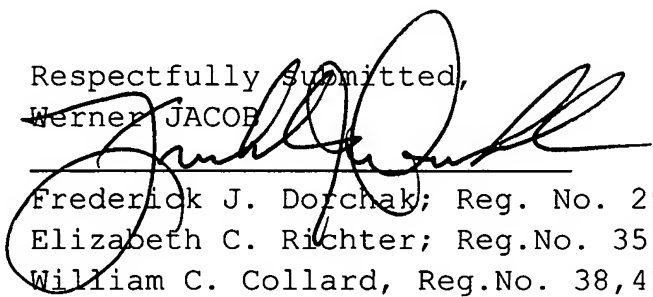
The advantage of directly centering the entire longitudinal shaft on the journals of a gearbox output shaft and a differential input shaft which is achieved by the drive shaft

assembly as recited in amended claims 8 and 9 is not achieved if additional flanges are used as disclosed in *Fisher*.

In view of the foregoing, Applicant respectfully submits that the amended claims are patentable over the cited references, considered alone or in combination.

In summary, claims 2-11 have been amended. In view of the foregoing, it is respectfully requested that the claims be allowed and that this application be passed to issue.

Respectfully Submitted,
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Enclosures:

Petition for three-month Extension of Time,
Third Supplemental Information Disclosure Statement,
Form PTO-1449 with copy of International Search Report

Express Mail No.: EM 184 377 675 US

Date of Deposit: April 18, 2008

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10, on the date indicated above, and is addressed to the MAIL STOP: RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Amy Klein